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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,385	01/05/2006	Jun Li	PU030023	3002

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EXAMINER	
BRANDT, CHRISTOPHER M	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
04/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,385	LI ET AL.	
	Examiner	Art Unit	
	CHRISTOPHER M. BRANDT	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-12 are rejected under 35 USC 103(a) as being unpatentable over **Hunt et**

al. (US PGPUB 2003/0013452 A1, Hunt) in view of **Chitrapu et al. (US PGPUB 2003/0185178 A1, hereinafter Chitrapu)**.

Consider **claim 1 (and similarly applied to claim 6)**. Hunt clearly show and disclose a method for achieving wireless communications in a network having at least one macro cell for communicating both voice and data with a mobile communications device across a first wireless link and, at least one micro cell, with a smaller coverage area and higher capacity per user than the macro cell, for communicating data with the mobile communications device across a second wireless communication link, the method comprising (abstract, paragraphs 4-5, 10, 23, 28-30, read as a method for achieving cellular radio communication system, which comprises a plurality of pico cells 106 (figure 2) and an umbrella macro cell 102 (figure 2). The pico cell 102 is capable of voice telephony and data communications with a Mobile Station 110 (figure 2) using a sub-channel 212 (figure 2). In addition, the pico cells 106 pass data across a sub-channel 214 (figure 2) to a terminal 110 (figure 2) dedicated for higher data rates the steps of:

communicating signaling information between the one micro cell and the one macro cell via a third wireless channel; and controlling the operation of the micro cell responsive to the signaling information (abstract, paragraphs 4-5, 10, 23, 28-30, read as a communication channel between the secondary station and a primary station, which comprises control and data sub-channels for the respective transmission of control information and user data. This communication channel also provides a means for a data sub-channel between the secondary station and controlling primary station for the pico cell. The macro cell BS 104 has direct links (i.e. third wireless channel) to the pico cell base stations 108 included within the umbrella macro cell 102, and routes data to and from whichever is appropriate for current communications in a

manner which is transparent to the network. In addition, when there is a data packet to be transmitted to the user (i.e. attempting to access the micro cell), the macro cell 102 routes the data to the identified pico cell 106. Moreover, the macro cell BS 104 may also instruct the chosen pico cell BS 108 to vary transmission parameters (such as data rate, transmission power) to modify the quality of the chosen link. In addition, Hunt discloses that the macro cell may also instruct the chosen pico cell to vary transmission parameters (i.e. signaling information)).

Hunt discloses the claimed invention except he fails to explicitly disclose that the micro cell and the one macro cell are directly communicating in response to access of the micro cell by the mobile communications device.

However, Chitrapu discloses that the micro cell and the one macro cell are directly communicating in response to access of the micro cell by the mobile communications device (paragraphs 74, 80, read as a C-plane server is directly connected to the RIP GW, which allows the sharing of resources for control signal processing in case such as the UE would access the RAN IP when moving outside of the RLAN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Chitrapu into the invention of Hunt in order to enable connectivity to the public network using utilizing IP packet service (paragraphs 23, 74).

Consider **claim 2 and as applied to claim 1**. Hunt teaches the method wherein step of controlling the micro cell includes the step of managing access to the micro cell by the mobile communications device (Hunt; figure 2, paragraph 25, 29, 30).

Consider **claim 3 and as applied to claim 1**. Hunt teaches the method wherein the step of communicating signaling information via the third wireless channel includes the step communicating signaling information from each mobile communications device separately (Hunt; figure 2, paragraphs 23, 28-30).

Consider **claim 4 and as applied to claim 1**. Hunt teaches the method wherein the step of communicating signaling information via the third wireless channel includes the step of encapsulating signaling information from a plurality of mobile communication devices in a common packet (Hunt; figure 2, paragraph 23, 28-30).

Consider **claim 5 and as applied to claim 1**. Hunt teaches the method further comprising the step of assigning to the mobile communication device codes and power settings to enable the mobile communication device to communicate with macro cell and micro cell simultaneously (figure 2, paragraphs 22-23 and 26).

Consider **claim 7 and as applied to claim 6**. Hunt and Chitrapu disclose wherein the control element comprises a Service General Packet Service Node (SGSN) (Chitrapu; paragraph 26).

Consider **claim 8 and as applied to claim 6**. Hunt teaches the system wherein the control element manages access to the micro cell by the mobile communications device (Hunt; figure 2, paragraphs 25, 29, 30).

Consider **claim 9 and as applied to claim 6**. Hunt teaches the system wherein each micro cells separately communicates signaling information from each mobile communication device across the third wireless channel (Hunt; figure 2, paragraphs 23, 28-30).

Consider **claim 10 and as applied to claim 6**. Hunt teaches the system wherein the signaling information of each of a plurality of micro cells is encapsulated into a common packet for communication across the third wireless communication channel (Hunt; figure 2, paragraphs 23, 28-30).

Consider **claim 11 and as applied to claim 6**. Hunt teaches the system wherein the control element assigns to the mobile communication device codes and power settings to enable the mobile communication device to communicate with macro cell and micro cell simultaneously (Hunt; figure 2, paragraphs 22-23, 26).

Consider **claim 12 and as applied to claim 7**. Hunt and Chitrapu disclose wherein the control element further comprises: a Gateway General Packet Radio Serving Node (GGSN); and an Internet Protocol tunnel for linking the GGSN to an Internet Protocol gateway (Chitrapu; paragraph 24).

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098. The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Christopher M. Brandt
C.M.B./cmb
April 3, 2008

/George Eng/
Supervisory Patent Examiner, Art Unit 2617